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| 10/051,567 | 01/18/2002 | Yoshiharu Hashimoto | 15227 | 3382 |
| 23389 | 7590 | 08/01/2006 | EXAMINER | |
| SCULLY SCOTT MURPHY & PRESSER, PC 400 GARDEN CITY PLAZA SUITE 300 GARDEN CITY, NY 11530 | | | KUMAR, SRILAKSHMI K | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2629 | |

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--|---|--|
| Office Action Summary | Application No. 10/051,567 | Applicant(s) HASHIMOTO, YOSHIHARU | |
| | Examiner Srilakshmi K. Kumar | Art Unit 2629 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) 8-38 and 43-56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 39-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The following office action is in response to the response to requirement for restriction filed May 2, 2006. Applicant has elected claims 1-7 and 39-42. Claims 8-38 and 43-56 have been withdrawn from consideration.

Election/Restrictions

- Applicant's election without traverse of Group 1, claims 1-7 and 39-42 in the reply filed on May 2, 2006 is acknowledged.

Claim Objections

- Claims 40 and 41 are objected to because of the following informalities:

Claims 40 and 41 are the same claim and depend upon the same claim. As shown by the table below, there are only minor differences between the claims. The similar claim language are referenced by the *italicized* lettering. The differences in the claim language are **bolded**.

Applicant is requested to either amend the claims to state different limitations or cancel one of the claims. Appropriate correction is required.

| Claim 40 | Claim 41 |
|---|---|
| <i>The method of driving a color display of claim 39,</i> Wherein said <i>voltages corresponding to highly significant bit signals of said image display data are selected to values which are high voltages different from a power voltage for driving said data electrode driving circuit</i> | <i>The method of driving a color display of claim 39,</i> <i>Voltages corresponding to highly significant bit signals of the image display data are selected to values which are high voltages different from a power voltage for driving the data electrode driving circuit or low voltages</i> |

| | |
|---|--|
| <i>or low voltages different from a grounded voltage and are applied to a corresponding data electrode as said data signals.</i> | <i>different from a grounded voltage and are applied to a corresponding data electrode as the data signals.</i> |
|---|--|

As shown by the table, the differences in the claim language do not change the actual claim, therefore claims 40 and 41 are considered to be redundant claims.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 39-41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to claim 39, applicant claims “applying sequentially data signals to said plurality of scanning electrodes by controlling a data electrode driving circuit”. This limitation is considered to be new matter as it is not disclosed in the specification. Applicant is requested to disclose support for this claim limitation from the applicant’s specification.

Claims 40 and 41 are also rejected as they depend upon claim 39.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 39-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 39, applicant claims “applying sequentially data signals to said plurality of scanning electrodes by controlling a data electrode driving circuit”. Examiner is unclear as to how the data signals are applied said plurality of scanning electrodes. Applicant is requested to disclose where in the specification this limitation is explained. In order to further prosecution, Examiner will interpret the claim to be “applying sequentially data signals to said plurality of *data* electrodes by controlling a data electrode driving circuit”.

Claims 40 and 41 are also rejected as they depend upon claim 39.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 1-7 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chee et al (US 5,886,689).

As to independent claim 1, Chee et al disclose a method of driving a display in a normal driving mode and a power saving mode (col. 1, lines 23-41), wherein in said normal driving mode, voltages corresponding to image display data are applied to data electrodes of said color display (col. 1, lines 43-59), and wherein in said power saving mode (col. 1, lines 43-65),

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voltages corresponding to bit signals of said image display data are applied as display data signals to said data electrodes (col. 1, lines 43-65). Chee et al do not explicitly state highly significant bits. Chee et al disclose in col. 7, lines 58-col. 8, line 2, 25-48 where in different power saving modes, voltage is reduced to non significant items. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made that voltages corresponding to highly significant bits are applied are present in the display of Chee et al. as shown in col. 7, lines 58-col. 8, line 2, 25-48.

As to dependent claim 2, limitations of claim 1, Chee et al disclose wherein said power saving mode includes an essential information display mode (col. 5, lines 37-65), where a predetermined uniform voltage level, which corresponds to a predetermined color (col. 5, lines 37-65) and which is independent from said image display data, is uniformly applied to all data electrodes on other region that at least a designated region for displaying the essential information (col. 7, lines 9-44).

As to dependent claim 3, limitations of claim 2, and further comprising, Chee et al do not explicitly teach where the display is of normally white type. Chee et al disclose an active or “on” state in the normal mode in col. 1, lines 53-59. It would have been obvious to one of ordinary skill in the art at full power or normal mode, the display would in an “on” state, of normally white type.

As to dependent claim 4, limitations of claim 2, and further comprising, Chee et al disclose the display is of black type (in col. 1, lines 53-59, wherein the state is a “sleep” state or “off”, thus the display would be of black type).

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As to dependent claim 5, limitations of claim 2, and further comprising, Chee et al disclose wherein a uniform scanning signal is simultaneously applied to all scanning electrodes on other region than said at least designated region for displaying the essential information (col. 5, lines 37-48, 66-col. 6, lines 12).

As to dependent claim 6, limitations of claim 1, and further comprising, Chee et al disclose wherein at least a full color display region in said color display is displayed in said normal driving mode (col. 1, lines 53-55, the “on” state), and wherein at least a partial color display region in said color liquid crystal display is displayed in said power saving mode (col. 7, lines 9-44).

As to dependent claim 7, limitations of claim 1, and further comprising, Chee et al disclose wherein said power saving mode further inactivates a gray scale voltage generating circuit (col. 7, lines 45-57), a polarity selecting circuit, and an output circuit included in a driver circuit for driving said color display (col. 8, lines 25-48).

As to dependent claim 42, limitations of claim 1, and further comprising, Chee et al disclose wherein said highly significant bit signals are a plurality of most significant bits of the image display (col. 7, lines 58-col. 8, line 2, 25-48).

9. Claims 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chee et al as applied to claim 1 above, and further in view of Kim (US 6,191,770).

As to dependent claim 39, Chee et al do not disclose generating a plurality of scanning signals by a scanning electrode driver circuit; applying sequentially said plurality of scanning signals to a plurality of scanning electrodes in the color display by controlling said scanning

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electrode circuit; applying sequentially data signals to said plurality of scanning electrodes by controlling a data electrode driving circuit.

Kim discloses in col. 1, lines 14-46, generating a plurality of scanning signals by a scanning electrode driver circuit (col.1, lines 26-27, gate driving circuit), applying sequentially said plurality of scanning signals to a plurality of scanning electrodes in the color display by controlling said scanning electrode circuit (col. 1, lines 26-27, 38-45), applying sequentially data signals to said plurality of data electrodes by controlling a data electrode driving circuit (col. 1, lines 23-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the displaying method of the display device as taught by Kim into the power saving display device of Chee et al as the display method of Kim is a conventional Liquid Crystal Display device (col. 11, lines 14-45 of Kim), and the display of Chee et al is a conventional LCD device.

As to dependent claims 40 and 41, Chee et al disclose wherein said voltages corresponding to highly significant bit signals of said image display data are selected to values which are high voltages (col. 7, lines 58-col. 8, line 2, 25-48) different from a power voltage for driving the data electrode driving circuit or low voltages different from a grounded voltage and are applied to a corresponding data electrode as said data signals (col. 7, lines 58-col. 8, line 2, 25-48).

Response to Arguments

10. Applicant's arguments filed May 2, 2006 have been fully considered but they are not persuasive.

With respect to claims 1-7, applicant argues where the prior art, Chee et al do not render the limitation of highly significant bits to be obvious. Examiner respectfully disagrees. Chee et al disclose in col. 7, lines 58-col. 8, line 2, 25-48 where in different power saving modes, voltage is reduced to non significant items. Further, Chee et al discloses four different power saving modes, where in each mode different power saving functions are reduced. In one of the power saving modes, Chee et al reduces grey scale, thus reducing the insignificant bits of the display, and only displaying the required items. Therefore, the prior art Chee et al renders the highly significant bits obvious.

With respect to newly added claims 40 and 41, they have been objected to as they disclose the same limitations and depend upon the same claim, see claim objections, above.

With respect to newly added claim 39, the limitation of “applying sequentially data signals to said plurality of scanning electrodes by controlling a data electrode driving circuit” is not disclosed by the specification, therefore is considered to be new matter. Applicant is requested to disclose the support from the specification for this claim limitation.

Further, claim 39, is also rejected as being indefinite. The claim limitation of “applying sequentially data signals to said plurality of scanning electrodes by controlling a data electrode driving circuit” is unclear. Examiner is unclear as to how the data signals are applied to said plurality of scanning electrodes. Applicant is requested to disclose where in the specification this limitation is explained.

As shown above, the prior art Chee et al, either singularly or in combination with Kim disclose the claimed limitations set forth in the instant application, therefore, the rejection is maintained and made FINAL.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 571 272 7769. The examiner can normally be reached on 9:00 am to 5:30 pm.

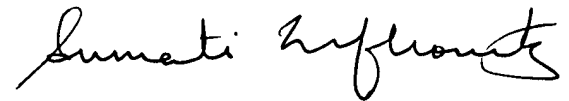
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571 272 3638. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Srilakshmi K. Kumar
Examiner
Art Unit 2629

SKK
July 23, 2006



SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER